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REPORT NO. 852

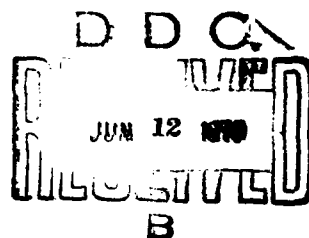
A SINGLE CARD LABORATORY REFERENCE INDEX SYSTEM

(Final Report)

by

SFC Arthur H. Schipul, Jr.

18 February 1970



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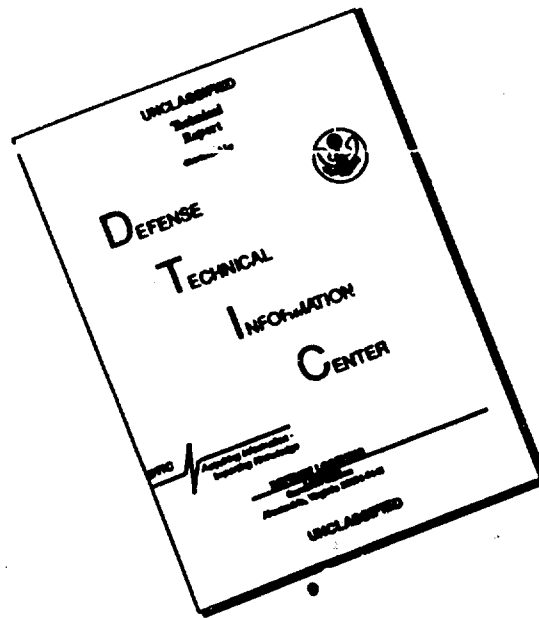


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ACKNOWLEDGMENT

Figures 1 and 2 are made from the Keysort Notching and Sorting Manual, McBee Automated Business Systems. The assistance of Mr. William P. Colsher, McBee Sales representative, is duly noted and appreciated.

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A SINGLE CARD LABORATORY REFERENCE INDEX SYSTEM

(Final Report)

by

SFC Arthur H. Schipul, Jr.*

Blood Transfusion Division
US ARMY MEDICAL RESEARCH LABORATORY
Fort Knox, Kentucky 40121

18 February 1970

Evaluation of Blood Bank Methodology
Work Unit No. 158
Combat Surgery
Task No. 00
Combat Surgery
DA Project No. 3A062110A821

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USAMRL REPORT NO. 852
DA PROJECT NO. 3A062110A821

ABSTRACT

A SINGLE CARD LABORATORY REFERENCE INDEX SYSTEM

OBJECTIVE

To develop a quick-access file to scientific references for general laboratory use.

METHODS

Punch card filing system was coded in five systems to provide a general index as well as cross-reference file.

CONCLUSIONS

Single card entry for each reference was integrated into a five-code classification system to provide casual access. The system was economical and readily adaptable to individual or general laboratory use.

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A SINGLE CARD LABORATORY REFERENCE INDEX SYSTEM

INTRODUCTION

There comes a time in the life of a medical laboratory technologist when a search for a particular reprint in a mountain of acquired references is in a direct exponential relationship to user development. When this occurs, one may either paraphrase from memory or go to the Index Medicus for an organized method to search for the particular reprint again. It is the purpose of this article to describe a simple one card (self-coordinated) reference index for medical laboratory technologists to permit rapid access to references.

MATERIALS AND METHODS

This system utilizes a standard Keysort card (KD 584B), a hand punch (#5227), a Keysorter or steel needle set in a handle, and an alignment block. Optional items are card savers or correction tapes.

The system revolves around a Keysort bibliographic card whose edges are divided into five basic coded areas. The data are coded onto each card by a series of simple punches designating the year, author, classification index, numerical index, and a direct index.

When the five coded areas are carefully keyed to laboratory requirements, a simple but accurate reference index emerges. The author utilizes the following divisions for the five areas:

1. Year of reference publication.
2. Alphabetical index (senior author).
3. Direct index (major laboratory subject - 60).
4. Classification index (subdivisions of major subjects - 32).
5. Numerical index (project number - see below).

DISCUSSION

With such a classification scheme the necessity for cross-index filing (a requirement in most coordinated reference systems) is eliminated. One file contains all the necessary information in this edge-punched information retrieval system. The requirements for author files, key word files, and subject reference files are thus eliminated.

A search of this card system is performed by inserting a Keysorter needle in the applicable punches of the five areas on a stack of cards. The desired cards will fall readily from the stack. In addition to ease

in finding information, the system makes refiling a simple matter of replacing the cards anywhere in the file container. The needle will infallibly find them when they are needed again.

Two types of codes have been determined to be essential to such a system, i.e., numerical and alphabetical. The numerical code depends upon a field of four holes to classify values of one to nine by notching as indicated in Figure 1. Zeros are not notched. The alphabetical code depends upon a similar pattern with the letters of the alphabet being assigned numbers. The notching for the alphabetical code is illustrated in Figure 2 (page 4).

Figure 3 (page 5) shows a sample Keysort card with the type of area classification indicated. The year of the reference publication is self-explanatory. The alphabetical index area is used for the first three letters of the surname of the senior author. In the instance of such common names as Smith, the first two letters and the first initial might be used: Smith, Arthur, would code as SMA.

The direct index area is only used partially. Holes one to 30 in double rows give a possible 60 major laboratory subject headings: Administration, lab; Bacteriology; Computer Technology; etc.

The classification index requires a slight adaptation. The designated area for the classification index incorporates those holes above and below the printed words "classification index." This permits an expansion to 32 subdivisions of the major subjects in the direct index: Theory; Automated Procedures; Manual Procedures; etc. To notch, the numbers one to 32 were visually assigned in this area.

The numerical index permits a sequence coding to 999. This area is utilized for the identification numbers assigned to our research projects, based upon a special code. The numerical system could also be designed to fit individual needs.

To the left of the numerical index are four unused holes. These have been assigned a disposition code for papers prepared for presentation.

Figure 4 (page 5) shows a sample card from our established reference file. It should be noted that a full bibliographic entry and an abstract are typed on the Keysort card itself, with room below for additional notes such as "used for publication reference." The reference number is a sequentially assigned number given to all reprints, etc. These are stored approximately 500 reprints to a large file box and are thus readily available.

The entire system may be purchased at a relatively modest price when weighed against the time and frustration involved in searching for "lost" reprints.

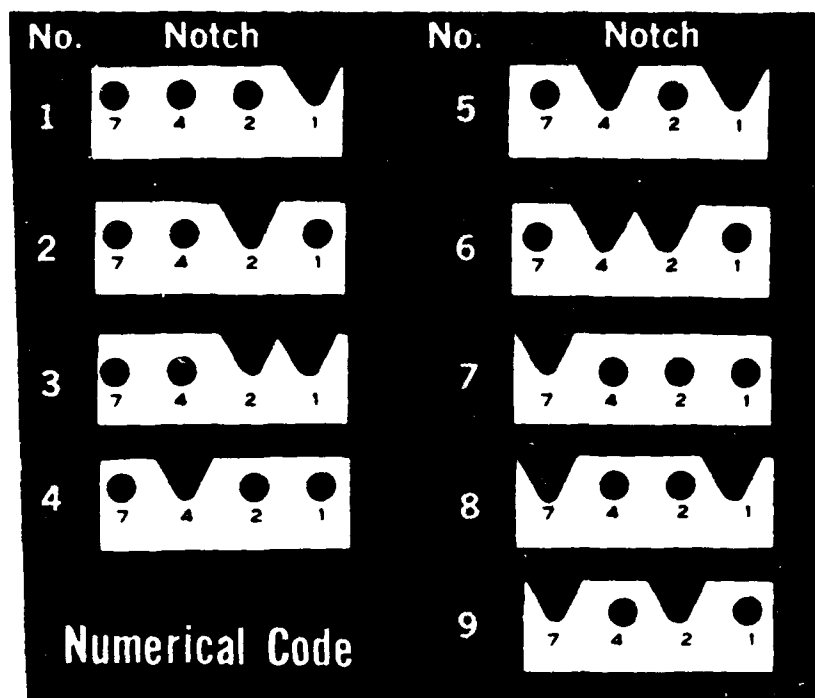


Fig. 1. Numerical Code for Laboratory Reference Index System.

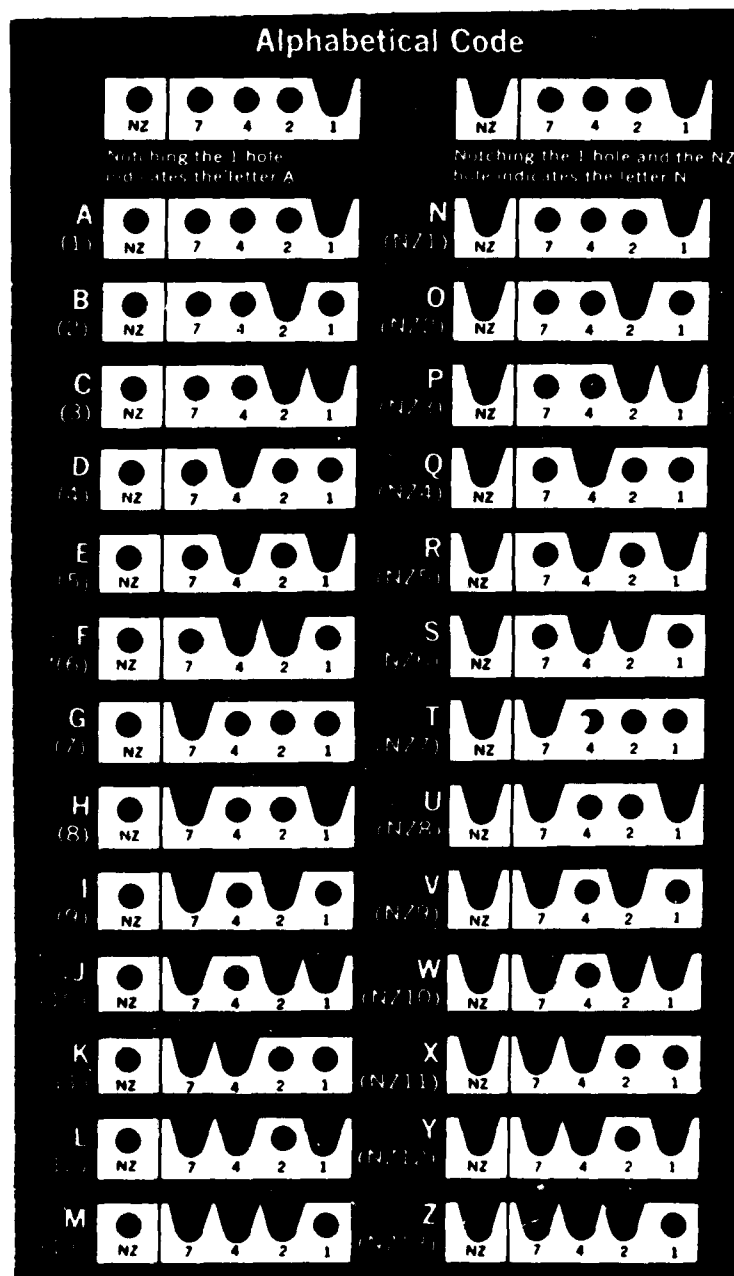


Fig. 2. Alphabetical Code for Laboratory Reference Index System.

Subdivisions of Major Subjects (32)		Year of Ref. Publication	
Research Project ID Number		Ref. No. _____	
<p style="text-align: center;"><u>ABSTRACT OR REFERENCE NOTES</u></p>		<p style="text-align: center;">First Three Letters of Senior Author's Surname</p>	
Conference Presentation		Major Laboratory Subjects (60)	
Rejected			
Accepted			
Submitted for Publication			

Fig. 3. A sample Keysort card with the area classifications indicated.

Ref No 176	
<p>Shields, C. E.: Effect of adenine on stored erythrocytes evaluated by autologous and homologous transfusions. Transfusion 9: 3, 1969</p> <p>Blood obtained from normal volunteers and stored in ACD with or without adenine was evaluated by both tests <i>in vitro</i> and by 24-hour recovery following transfusion. Significant differences between autologous and homologous transfusions were not detected. The changes that did occur were limited to evidence of lesser erythrocyte breakdown in ACD units fortified with adenine. These units were associated with higher survival values at all storage periods evaluated and displayed over 70 per cent 24-hour posttransfusion survival even after 42 days of storage.</p>	

Fig. 4. A sample reference card with notches illustrating the area classification codes.

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13. ABSTRACT <p>A single card (self-coordinated) laboratory reference index is described. It utilizes a modified Keysort bibliographic card classification. The references are cross-indexed via a five-code classification for: 1) year of publication reference, 2) alphabetical index (senior author's surname), 3) a direct index (major laboratory subject), 4) classification index (minor subject division of direct index), and 5) numerical index (project number).</p> <p>This edge punched data retrieval system is economically feasible and can be readily adapted to individual or medical laboratory use.</p>		

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Laboratory reference index Keysort card classification Data retrieval Self-coordinated index system Cross-indexed card classification						

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